

## THE GUANO SUBJECT.

In inserting the article yesterday upon the adulteration of guano, we had no intention whatever of reflecting in any manner, on those who are honestly engaged in mixing the really valuable Phosphate and Peruvian Guano together, by which process a cheaper and more permanent fertilizer is made. The value of the Peruvian Guano is too well established to render any remarks on its necessity. The opinion of Professor Campbell Moritt, whose attention as a chemist, is world-wide, is quite sufficient to set at rest any doubt upon this subject. His letter to Messrs. Patton, A. Miller, and Messrs. F. C. Wade, and Co., of Savannah, places the Peruvian guano in the first rank amongst fertilizers. He says: In reply to your letter of 23rd February requesting my professional opinion upon certain points of Agricultural interest, and which more immediately concern you as honorable dealers in fertilizers, I have given the subject its due consideration, and now submit my report.

Your question, as to the rank which belongs properly to Sombro Guano, will be best answered by the annexed table which shows its composition:

Water, 5.52; Sand, 5.68; Organic matter, soluble, 5.56; Sulphate Lime, 8.0; Lime (with Organic Acid), 6.97; Carbonate Lime, 5.34; Bone Phosphate Lime, 6.47; Phosphate Magnesia, 2.39; Phosphate Alumina, 3.02; Silicate Potassa and Lime, 7.0; Oxide Iron, 1.19; Alumina, 3.13. Total, 100.44.

Actual Bone Phosphate, 67.36; or Calculated Bone Phosphate, 75.78.

The above analysis was conducted with the right care of a scientific investigation. The samples employed were all of assured integrity, being a fair average of several crops, ascertained from reliable sources.

The Commercial and Agricultural exportation of this Guano, as above noted, I have distinguished the Phosphate Acid, which exists in combination with Lime and Magnesia, as actual Bone Phosphate, while I give the title of calculated Bone Phosphate to the actual phosphate conjointly with that portion of Phosphate Acid present in the Guano as Phosphate of Alumina and Phosphate of Iron, because the equivalent of the latter in Bone Phosphate of Lime is determined by calculation. The Alumina and Iron Phosphates; it may be proper to add, though of value in the fertilization of soils, are, in degree, inferior, for that purpose, to actual Bone Phosphate of Lime. With this explanation it will be evident, then, from the table, that the percentage of Bone Phosphate is not only higher than other Phosphate Guano, but also because of its very much greater richness in Phosphate Acid, but also for the reason that nearly the whole of that constituent exists in the Guano as actual Bone Phosphate of Lime. Moreover, Sombro Guano is characterized by much uniformity of dryness and composition, as well as by a very limited amount of matters which would be valueless to crops.

2. The presence of oxide of iron is detrimental to a fertilizer, when the proportion may be excessive and in indissoluble combination. But these conditions, which are not present in Sombro Guano, will yield only a small quantity of iron, and will yield with sufficient readiness to the solvent power of atmospheric agencies in the soil. I base my judgment upon a large laboratory experience with this guano.

And I may remark, further, that the idea of its being deficient in capacity for making Superphosphate, as pronounced by others, is founded in ignorance of the true nature of the Guano. Indeed, with the proper knowledge, a Superphosphate of the highest fertilizing efficiency can be made from it at a reasonable economy of cost. Respectfully yours,

CAMPBELL MORITT.

In addition to the above we add the following extract from the Philadelphia article.

"The Peruvian phosphate guano has been imported into this country from the Cape Verde Sea, and is quite a large quantity has been thrown into market. This substance exists in the form of a hardened deposit not crystalline like the phosphate of New Jersey and Estramadura, but like hard-baked pipe clay, or in island in the Pacific, 100 miles, midway between Anguilla and the Virgin Islands. The color of the 'Sombro' is very different from that of Peruvian or other guano, being a light drab so that it would seem a poor article to mix with Peruvian, with which it is often adulterated. Various eminent chemists have pronounced it remarkably rich in phosphoric acid, in union with lime, generally placing it as high as 50 per cent. Its peculiar mechanical texture is such that it would seem especially adapted to the soil, and hence of high value for the plant. Whether such is actually the case we cannot say, for the guano has only been in market three years. It meets with peculiar favor with the large Southern firms, who sell Peruvian with phosphate, and hence it is the compound under proper names. Since the island came in American possession, three years ago, the demand in this country for its guano deposits has risen from 25,000 tons the first year to 20,000 the present year, and it is now imported in large quantities, and is quite a quantity being annually supplied, because of its being so hard and only two anchorages at half a mile from shore. We learn that the large employers in mining and shipping are now ordering 25,000, 20,000, and 15,000 tons, and about a dozen farmers, under the direction of a superintendent and assistant. A chemist is also sent upon the island, employed to analyze all the cargoes shipped, and send him word when it contains 20 per cent. of phosphate of lime. The Knox, formerly of the U. S. Navy, but now assistant superintendent at the island, has estimated the contents of guano at 2,500,000 tons. The process of quarrying and blasting with gunpowder is employed to get out the guano, and in lumps it is brought to this country, where it is ground in a suitable mill before it is fit for use. If the phosphate of lime should prove to be as valuable as it is claimed to be, this guano is a real acquisition, but whether it be so or not, time alone can demonstrate."

By the Rev. Wm. Conner Blount, of the M. E. Church South, on Tuesday morning, Oct. 2d, 1860, M. SAMUEL C. POWERS and Miss EMILY SPINKS, all of Alexandria, Va.

On the 24th ultimo, at Wesleyan Church, Clarke County, Va., the Rev. J. H. CLARK, M. E. Church South, of Washington, D. C., and Miss MARY E. JOHNSON, of Washington, D. C., were united in Holy Matrimony, by the Rev. J. H. CLARK, M. E. Church South, of Washington, D. C.

On the 17th ultimo, by Rev. Father Knight MARY ELLEN BAILY, of Washington, D. C., and THOMAS S. WAINWRIGHT, of Lexington, Kentucky.

On Thursday evening, September 27th, by the Rev. John Pickett, DAVID GRIMES, esp. to Miss ELIZABETH HOOPE, all of Fairfax.

Sabbath, at Potomac, near Washington, on Monday, Oct. 1st, of paralytics, DARIUS CLARKE, of the Rev. J. H. CLARK, M. E. Church South, of Washington, D. C.

On Monday, October 1st, 1860, in the 51st year of age, of consumption, EDWARD W. COLLINS, son of the Rev. J. H. CLARK, M. E. Church South, of Washington, D. C.

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